

## CLAIMS

What is claimed is:

1. A ferrule connector assembly comprising:

a housing having a first end, a second end, and a bore extending from said first end to said second end, said first end being adapted to receive a ferrule containing an optical fiber;

a split sleeve at least partially disposed within said bore at said second end and secured within said housing through a press fit; and

a core member at least partially disposed within said split sleeve, said core member having a hole optically aligned with the optical fiber.

2. The ferrule connector assembly of claim 1, wherein said housing further comprises at least one support structure, said at least one support structure being adapted to hold said split sleeve in optical alignment with said optical fiber of said ferrule.

3. The ferrule connector assembly of claim 1 wherein said housing further comprises an attachment structure disposed at said first end.

4. The ferrule connector assembly of claim 1, wherein said housing is radially symmetrical.

5. The ferrule connector assembly of claim 1, wherein said core member is formed to a precise dimension to ensure alignment of said hole with said optical fiber.

6. The ferrule connector assembly of claim 1, wherein said core member is formed to a precise dimension using a center-less grinding process.

WORKMAN NYDEGGER  
A PROFESSIONAL CORPORATION  
ATTORNEYS AT LAW  
1000 EAGLE GATE TOWER  
60 EAST SOUTH TEMPLE  
SALT LAKE CITY, UTAH 84111

7. A ferrule connector assembly comprising:

a split sleeve adapted to receive a core member, said core member having a longitudinal hole therethrough; and

a housing having a bore therethrough, said housing having a first end adapted to receive said split sleeve and said core member and a second end adapted to receive a ferrule;

wherein said core member is inserted into said split sleeve and said split sleeve is then inserted into said first end of said housing, said split sleeve being held in place without the use of adhesives.

8. The ferrule connector assembly of claim 7, wherein said housing further comprises at least one securing structure cooperating with said bore, said at least one securing structure extending towards a central axis of said bore to engage with said split sleeve.

9. The ferrule connector assembly of claim 7, wherein said housing further comprises at least one securing structure that extends generally away from an inner surface of said bore.

10. The ferrule connector assembly of claim 9, wherein said at least one securing structure has sufficient resiliency to apply a force against said split sleeve to prevent removal of split sleeve.

11. The ferrule connector assembly of claim 7, wherein said housing further includes at least one attaching structure that enables said housing to attach to an optical component.

12. The ferrule connector assembly of claim 7, wherein said core member is disposed within said bore of said split sleeve and extends partially along a length of said split sleeve.

13. The ferrule connector assembly of claim 7, wherein said split sleeve further comprises a distal end, a proximal end, and a channel extending from said distal end to said proximal end.

14. The ferrule connector assembly of claim 7, wherein said bore comprises a first portion and a second portions, said first portion having a diameter larger than said second portion.

15. The ferrule connector assembly of claim 14, wherein said bore further comprises a tapered portion cooperating with said second portion.

16. A method for assembling a ferrule connector assembly comprising:
- a step for inserting a core member having a hole therein into a split sleeve to form a sleeve assembly; and
  - a step for inserting said sleeve assembly into a housing, said housing having a first end adapted to receive a ferrule and a second end adapted to receive said sleeve assembly;
17. The method of claim 16, wherein said step for inserting further comprises:
- a step for positioning said housing within a receptacle of a press guide assembly,
  - a step for mounting said sleeve assembly on a press guide of said press guide assembly; and
  - a step for forcing said sleeve assembly into a bore of said housing.
18. The method of claim 17, wherein said step for forcing comprise:
- a step for disposing a portion of a guide tip in said hole; and
  - a step for moving said sleeve assembly towards a second end of said housing.
19. The method of claim 18, further comprising a step for applying a biasing force against moving said sleeve assembly towards said second end.

20. The method of claim 17, where said step for forcing comprises:  
a step for disposing a portion of a guide tip upon a distal end of said split sleeve; and  
a step for moving said sleeve assembly towards a second end of said housing.

21. The method of claim 16, wherein said step for inserting further comprises:

a step for positioning said housing within a receptacle of a press guide assembly,  
a step for mounting said sleeve assembly into a bore of said housing; and  
a step for moving said sleeve assembly into a bore of said housing.

22. The method of claim 21, further comprising a step for applying a biasing force against moving said sleeve assembly into said bore of said housing.

23. The method of claim 21, further comprising a step for preventing excessive movement of said sleeve assembly into said bore of said housing.

24. The method of claim 21, further comprising a step for moving said sleeve assembly into said bore of said housing until a distal end of said split sleeve is substantially flush with said first end of said housing.

25. The method of claim 16, further comprising a step for forming said core member with a precise dimension.

26. The method of claim 25, further comprising a step for processing said core member using a center-less grinding process.

27. The method of claim 26, further comprising a step for processing said core member with a tolerance of less than one micrometer.

28. The method of claim 16, wherein the step for insert comprises a step for press-fitting said sleeve assembly into said housing.